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NEW APPROACHES TO THE ANALYSIS OF THE CAPITAL STRUCTURE OF SME´s: EMPIRICAL EVIDENCE FROM SPANISH FIRMS[1]

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Abstract

The main objective of this paper is to analyze the factors determining the capital structure of Spanish small and medium-sized enterprises. This analysis is grounded on agency theory, pecking order theory, and the signaling approach. The following elements were taken into consideration: i) the quantitative variables of the enterprises, and ii) qualitative or strategic variables, finally providing an analysis of the explanatory power of the firms' reputation, the ownership and control structure, and the relationship between the SMEs and the finance company. A definition of the relationships which might be expected between the proposed variables and the total borrowing ratio, according to the conceptual framework under consideration was given as well. A survey of 410 Spanish SMEs was considered in the empirical analysis. Firstly, we divided the survey into groups, according to the debt-equity ratio, and the application of an ANOVA test, then we tested for significant differences in the variables for each group. Next, we established a model of hierarchical regression for an overall comparison of the hypotheses that the theoretical model provided. Among the most relevant results, we should highlight that the only proposed hypotheses to be tested were those referring to the variables: 'number of finance companies' and 'existence of real covenants unrelated to the business'. It may be said that dealing with a greater number of companies and establishing a personal covenant increases the possibility of fund-raising on the credit market, thereby avoiding a situation of credit rationing. However, there is no confirmation of the explanatory power of the reputation or the ownership and control structure variables.

Key Words: Optimal capital structure - small and medium-sized enterprises - credit rationing - asymmetric information - lending relationships

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New approaches to the analysis of the capital structure of SMEs: empirical evidence from Spanish Firms

I- Introduction

The decision on capital structure (CS), i.e., the decision related to the existence of an optimal total borrowing ratio (TBR), is key to the whole issue of corporate finance.

Such a choice, like investment, financing and dividend policy decisions, should be evaluated in terms of its impact on the firm's main goal, which is to maximize shareholders' wealth, or in other words, maximize its market value for the shareholders. Thus, in efficient markets, market value becomes the benchmark against which the firm's policies, strategies and decisions are assessed.

The different theoretical approaches to optimal capital structure focus both on the effects of debt policy on the firm's financial objectives and the nature of the factors explaining its capital structure. Related literature has evolved from the 'thesis of irrelevance' in the Modigliani and Miller model (M-M) (1958) to the analysis of i) the tax shield provided by income taxes and its impact on corporations (Modigliani and Miller, 1963; De Angelo and Mansulis, 1980), and ii) on individuals (Miller, 1977) as well as iii) the financial distress derived from insolvency and bankruptcy risks (Brennan and Schwartz, 1978; Chem and Kim, 1979; Bradley, Jarrel and Kim, 1984) to the most recent contributions, which take into account information asymmetries and clash of interests between the agents involved. Within this last current of thought, we can find 'agency theory' (Jensen and Meckling, 1976), stakeholder theory, pecking order theory and the 'signaling approach'. In recent years, a new theory has been developed, studying the effects that business strategies have on capital structure decisions – the Theory of Business Strategies.

Although these theoretical approaches deal with capital structure from different perspectives, what they have in common is that they all study 'large' corporations (Michaelas, Chillenden and Poutziouris, 1999) as opposed to small and medium-sized enterprises. Thus, they consider borrowing patterns, almost exclusively, within the context of such 'large' companies. But the specific features that characterize small and medium size enterprises make it difficult to apply most of the above-mentioned analytical tools. For instance, one of the most important differences between large and small and medium-sized companies, is the unavailability of long-term funding through capital markets for SMEs and therefore the absence of market prices permitting objective assessment of their value (Osteryoung and Newman, 1993). Such differences suggest the need to take a new look at capital structure drivers for SMEs. Besides, since funding comes from different sources -credit markets for SMEs and capital markets for large companies-

it would make more sense to conduct further research among different groups of SMEs rather than between SMEs and large corporations.

The credit constraints faced by SMEs make credit markets their only available source of financing. Lending relationships (LR) are critical mechanisms of assessment and control, even though credit markets are certainly not efficient. The existence of information asymmetries and opposing interests between lenders and borrowers, lead to 'credit rationing' (Stiglitz and Weiss, 1988); Levenson and Willard, 2000, *inter alia*). Therefore, the SMEs' smaller size, lack of credit ratings or covenants, along with concentration of ownership and control in the entrepreneur's hands, increase information asymmetries, preventing SMEs from attaining better funding terms and conditions in the credit market (Fazzari, Hubbard and Petersen, 1988; Petersen and Rajan, 1994, 1995).

When looking for key factors that may explain CS, in addition to considering figures relating to size - number of employees, total assets, sales revenue- there are certain qualitative variables, such as market reputation, business experience, ownership structure and control, along with particular lending relationships that are likely to become key issues *ex ante* for SME financing. The CS of the SME has been discussed by Keasy and Watson (1987); Storey, Watson and Wynarczyk (1988); Ang (1991 and 1992); Reid (1993), Storey (1994); Robson, Gallagher and Daly (1994) and Jordan, Lowe and Taylor (1998); *inter alia*. In Spain, Maroto (1996); Boedo and Calvo (1997) and Aybar, Casino and López (2000); *inter alia* have published outstanding studies in this field.

This paper aims at contributing to the discussion on the CS of SMEs by considering not only the quantitative variables already mentioned but also those of a qualitative or strategic nature. It is structured starting with a brief summary of the different theoretical approaches analyzing the decision on CS (following this first introductory section). Then, in the third section, we discuss the peculiarities of CS decisions for SMEs, with further references to agency theory, pecking order theory and the signaling approach. In the fourth section, we present the results of our empirical analysis, the variables and hypotheses to be compared, along with the databases and methodologies applied. Finally, our conclusions and further references on the topic are presented in the fifth section.

2- Capital Structure Theories

The decision on CS looks for an optimal mix of debt- and equity-financing to maximize the market value of the firm. Modigliani and Miller (1958) proved that in so-called perfect financial markets -no taxes, no bankruptcy costs, all agents with equal access to information- the decision on CS becomes irrelevant, adding no value to shareholders, as the value of the firm relates solely to its assets' capacity to generate

profits. However, empirical evidence from both financial markets and the corporate world differs from M-M's 'perfect financial markets' proposition. Therefore, research has focused on the influence of taxes and bankruptcy costs on the firm's financial structure, in order to develop reliable explanations for actual borrowing policies. This led to the so-called 'compensation theory' of a trade-off between the positive and negative effects of financial leverage. However, the theoretical models developed by this theory failed to provide a completely satisfactory explanation to optimal CS either.

A number of other imperfections arising from information asymmetries and clash of interests among agents -shareholders, managers and lenders- should be taken into account as well. Such defects may modify investors' expected return and control and consequently impact on the firm's market value. The 'agency theory', the 'groups of interest theory', the 'pecking order theory' and the 'signaling' approach shed light on a new dimension to the problem, developing innovative answers to the CS issue (Azofra and Fernández, 1999).

The 'agency theory' was indeed a very significant step forward: a qualitative attempt to explain CS unlike previous theoretical approaches. The contractual model of the enterprise proposed by Jensen and Meckling (1976) provided a new theoretical and conceptual framework which permitted the introduction of other explanatory factors. Among the many contracts that define the nature of organizations, the "agency theory" focuses on the financial contracts established between the organization and the providers of liabilities, leading to two agency relationships: i) the "managerial relationship" established between shareholders and managers, i.e., between the owners of the capital and the management board of the enterprise; and ii) the "borrowing relationship" established between the lenders and the shareholders. The information asymmetry and the clash of interests among the different agents involved originate conflicts and agency costs. Thus, every financial structure is characterized by certain agency costs, as a consequence of the possible loss that both shareholders and lenders might suffer, in the event of possible opportunistic behaviors by managers or owners of the capital. These agency costs affect the value of the securities. The optimal CS minimizes total agency costs (Boedo and Calvo, 1997). On the other hand, "agency theory" analyses how borrowing can reduce the conflicts of agency emerging between shareholders and managers (1), as well as those conflicts characterizing the relationship between the shareholders and the fund petitioners in the financial borrowing contracts, which also determine the shareholders' willingness to grant funds, leading to situations of credit rationing (Harris and Raviv, 1991) (2).

A more risk-adverse attitude towards the risk of the management board among the shareholders also influences their preferences when designing the financial policy of the enterprise. According to the "pecking order theory"—whose main conclusion is the enterprise's organization of borrowing into a

hierarchy, as explained by Myers (1984); Pettit and Singer (1985)—, the management board has a greater preference for internal than for external funds, which are only accessed when there are real opportunities for profitable investment, or when self-financing is insufficient. In that case, the management board has a preference for borrowing, and only uses a share issue as a last resort —thus avoiding having to share the management with newcomers to the activity—, since this transmits negative information to the market (Myers, 1984; Myers and Majluf, 1984). This hierarchic order within enterprises is particularly relevant when they are small, due to the high costs derived from external financing which they must account for (Pettit and Singer, 1985), and which, in opinion of Myers (1984), is the main consequence of the information asymmetries existing in the credit market (Michaelas, *et al.*, 1999).

The "signaling approach" establish propositions about the sense and intensity of the market value response of the shares in the event of an announcement of changes in the CS. The central idea in this approach is that the market acts as a mechanism to supervise and control the managerial function, assessing its financial decisions as an indication or an information signal about the future cash-flow and solvency of the enterprise (Ross, 1977; Leland and Pyle, 1977).

3.- The decision on the capital structure within the context of the SME

The "large enterprise" has traditionally been the referential framework for corporate financing. This type of enterprises is mainly characterized by: i) a clear separation and specialization of the functions of ownership and control; ii) the dispersion of the ownership among a considerable number of shareholders; iii) the use of the share and bond issue markets as a source of financing; and iv) the role that the capital market plays as an assessment and control mechanism. Therefore, the existence of an objective assessment and control mechanism by means of stock quotation becomes the referential point for the analysis of the enterprise's financial decisions, and particularly, for the study of its CS-related decisions. Consequently, at this point we must ask to what degree the different theoretical frameworks that analyze this type of decisions may be applied for the analysis of the capital structure of the SME.

The literature has traditionally stressed the importance of quantitative variables related to the volume of assets, business turnover or number of workers, in the analysis of financial decisions. Without denying the importance of those factors, recent works (Ang, 1991, 1992; Osteryoung and Newman, 1993) underline the importance of other, qualitative variables related to how difficult it is to make use of share issue markets and the structure of ownership and control.

The limitations found by the SMEs when accessing capital markets —share and bond issue markets—

and the fact that its securities are not publicly negotiable in a secondary organized market, entail the non-existence of an objective mechanism of assessment and control for this type of enterprises. Consequently, it is not feasible to analyze the CS-related decisions taking as a point of reference their effect on the financial objective, defined as the maximization of the enterprise's market value. We consider that the financial dependency of small enterprises on the bank credit market means we should consider the lending relationship as the most adequate referential framework in order to analyze the CS. Petersen and Rajan (1994, 1995) prove that the total borrowing ratio decreases with age and increases with size. This is the same as stating that younger enterprises are more likely to turn to finance companies with third-party resources, whereas adult companies are self-financed (Berger and Udell, 1992, 1995; Cardone, R. Longarela and Camino, 1998, *inter alia*).

The concentration of ownership and control by which the SMEs is usually characterized may also have important consequences on the financing decisions. The lack of specialization of functions and the total overlap between the roles of the entrepreneur and the owner entail the lack of delegation of authority, and, therefore, the concentration of decision making in a single person, which encourages opportunistic behaviors by the owner-manager, who in turn has a major part of his/her personal and family wealth invested in the enterprise. This latter circumstance entails, moreover, the owner having de facto unlimited responsibility. Where there is a lack of specialization, there is a clear identification of the entrepreneur figure —owner-manager— with the enterprise in the SMEs, in such a way that the development of the latter is closely bound to the entrepreneur's life.

All these circumstances increase the level of information asymmetry and class of interests that exist between the different agents involved in the borrowing contracts, the agency approach and the hypotheses based upon the theory of signals and pecking order are the basis for analysing CS-related decisions in the case of SMEs.

4. Empirical analysis

4.1. Variables and relationships defining the model

Taking as a basis the rules established by agency theory, the pecking order theory and the signaling approach, and bearing in mind the unique characteristic that the SME presents, we are grouping the determining factors of the CS in two blocks: i) *quantitative variables* related to "size"; and ii) *qualitative variables(3)* related to "reputation" of the enterprise, its "ownership and control structure", and those characterizing the "lending relationship".

a. Size. The size of the enterprise allows the lenders to calculate its market power and, therefore, to

indirectly estimate its insolvency risk: The bigger the volume of assets, the profits, the sales or the number of employees, the greater the self-financing capacity, and the probability that the activities are correctly diversified and, consequently, the greater the solvency and the capacity to meet interest payments. The size is in turn related to other group of variables that determine the CS of the enterprise. Thus, larger enterprises present higher levels of investment, since they have a greater capacity to offer more covenants to the lender. On the other hand, if we consider the economies of scale related to the acquisition of new information, it is proportionally more expensive for lenders to supervise an SME than a "large" enterprise. Furthermore, an SME finds it harder to meet the information requirements established in the financial markets. Finally, it could be concluded that the size of the enterprise has traditionally been one of the factors explaining the structure and concentration of ownership. The larger the enterprise, the greater the separation between ownership and control, and the dispersion of the capital. The possibility that the management board might display opportunistic behaviors against the interests of the external shareholders explains the more frequent use of borrowing as an external mechanism to supervise the managerial function. For all these reasons, according to agency theory and the signals approach, we might expect a positive relationship between the size and the level of borrowing in the enterprise.

> *H.1: Size—measured by the number of employees, volume of sales and volume of assets—will be positively related to the total borrowing ratio.*

b. Reputation of the enterprise. One of the factors that may reduce the agency costs of borrowing, and especially those which originate from a situation of over-investment, is the variable that may be called "reputation of the enterprise" (Diamond, 1989; John and Natchman, 1985; Wijst, 1989). Diamond (1989) suggests that the "reputation of the enterprise" may be measured as a function of variables such as age and/or length of service. The reputation is reflected as greater ease in obtaining the required financing. The capital market's observation of the SME fulfilling its contractual obligations over a long period is one of the enterprise's most valuable intangible assets. The credit market accumulates this information, the variable reputation is related to the capacity of the enterprise to tackle its payment commitments originating in borrowing—repayment of the principal and interests (Cardone, *et al.*, 1998)(4). The managers' willingness to preserve this intangible asset discourages opportunistic decision-taking; high-risk investments are rejected in favor of more secure projects, thereby diminishing the agency costs of the borrowing derived from decisions on over-investment. Consequently, according to agency theory and the signals approach, it may be expected that the longer the service, the greater the reputation in the credit market, and, therefore, the greater the facilities to obtain the necessary financing.

The "reputation" may also be measured as a function of the number of years that the enterprise has been

owned by the entrepreneur. The scarce grade of specialization that generally exists in this type of enterprise with respect to the functions of ownership and control, together with many owner-manageress's reluctance to delegate responsibilities, creates a great dependency of the SME on the figure of the owner-manager. When this person withdraws from the post—due to decease, illness, retirement, change of activity, etc.— problems of succession may arise within the enterprise, causing the credibility and reputation acquired to be lost, and sometimes leading to the disappearance of the enterprise. Consequently, change of ownership is similar to creating and setting up a new enterprise, increasing the information asymmetry and the risk that the lender perceives (Boedo and Calvo, 1997). Therefore, a positive relationship may be expected between the number of years that the enterprise has belonged to its current owner and the level of borrowing.

> *H.2: Reputation —measured by the enterprise's years of service and the years that it belongs to its current owner— will be positively related to the total borrowing ratio*.

c. Ownership Structure. The relationship between the SME and the lenders is, in turn, characterized by the ownership and control structure in the enterprise. It is possible to distinguish two major types of SMEs, i) those in which the manager is the owner of the entire capital, and ii) the medium-sized family enterprises in which there is usually some extent of separation of functions. It is possible to identify two important interest groups: a) the owner-managers; and b) the external owners that do not sit on the management board (Ang, 1991, 1992).

If the capital and the control are in the hands of a few agents only, the clash of interests between managers and shareholders is diminished, and it is not necessary to use borrowing as a mechanism of supervision and control over the managerial function. There is also a reduction in the information asymmetries between lenders and borrowers, and possible opportunistic behaviors by owners-managers could be avoided. In consequence, according to agency theory, a positive relationship is expected between the degree of specialization and separation of the functions of ownership and control, and the total borrowing ratio.

Nevertheless, the pecking order theory points out that SMEs in which there is no separation of functions and in which the owner-manager has invested a major part of his/her personal wealth, so there is no self-financing, tend to show a preference for the use of borrowing, in order to avoid involving outsiders and the loss of control in the decision-taking.

H.3a: The specialization and the separation of the ownership and control functions are positively related to the total borrowing ratio (agency theory and signals approach).

H.3b: The specialization and the separation of the ownership and control functions are negatively related to the total borrowing ratio (pecking order theory).

e. Characteristics of the lending relationship. The possibilities of raising funds in the credit market may also be determined by the features characterizing the relationship between the lender and the borrower. Three explanatory variables have been considered in this respect: i) the "age of the relationship with the main finance company"; ii) "the number of finance companies", and iii) the existence of covenants, as well as their nature.

The experience of a past relationship completes the information that the lender has about the borrower and, at the same time, cuts study costs. Conversely, in the case of new applicants for funds, the lenders have only the information provided by the SME itself or the information that may be obtained from external sources, namely, from other lenders or from rating agencies. For all these reasons, the information asymmetry depends on the age of the lending relationship, in such a way that those enterprises maintaining a long-standing relationship are expected to grant credit more readily, since they are not the object of its rationing. The theory suggests that the enterprises with a closer association to the finance companies usually have fewer capital costs and greater availability of funds. Consequently, according to the rules of agency theory and the signals approach, a positive relationship is expected between the duration of the lending relationship and the level of borrowing.

H.4.a.: The length of service of the lending relationship is directly related to the total borrowing ratio.

The availability of credit may also be determined by the number of finance companies with which the borrower maintains a relationship. The bigger the number of entities with which the borrower deals, the greater the ease of access to credit, since the information relative to the relationship flows more freely, diminishing the levels of asymmetry that exist in the market.

H.4.b.: The number of financial companies with which the SME deals, is directly related to the total borrowing ratio.

The covenants that the manager-owner decides to provide and their nature may be an information signal about the future earnings that the entrepreneur-owner expects from his/her investment (Stiglitz, 1987).

The cost of losing these assets in the event of bankruptcy is the enticement that asserts the validity of that signal and that transmits positive information to the lenders about the borrowing capacity of the enterprise. From the point of view of the borrowing decision, the benefits for the entrepreneur willing to provide more covenants—of a personal nature, mainly, or related to certain assets that do not belong to the enterprise—, is materialized in a less probable credit rationing. The signal is greater when the covenants are personal or real, related to assets that do not belong to the business activity. In consequence, according to the agency theory and the signal approach, a positive relation is expected between the existence of those covenants and the total borrowing ratio.

> *H.4.c.: The existence of covenants in the borrowing contracts by the SME, is directly related to the total borrowing ratio.*

As stated above, the objective of this study is to make an exploratory analysis on the nature of the factors determining the CS in the case of SMEs. The total borrowing ratio has been considered as a dependent variable representative of the CS, defined as the quotient relation between third-party resources—lenders—and the total debt—a variable that is identify as TBR—. The explanatory variables in turn have been grouped in four blocks.

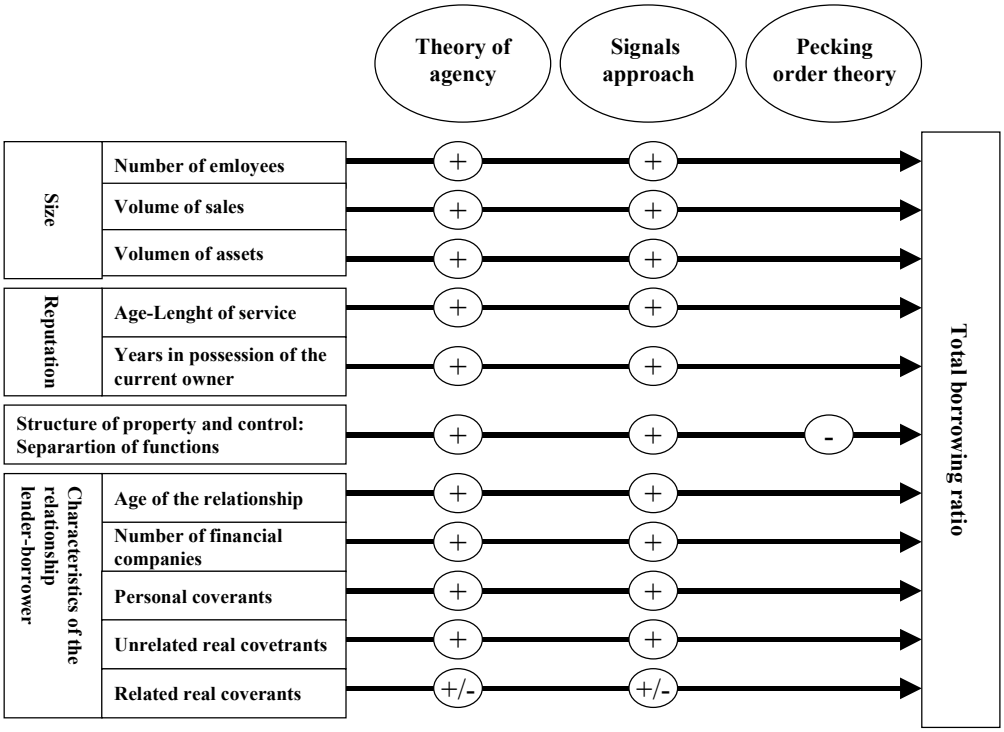
- *Block 1:* related to the size; three variables have been considered: i) SIZE1 related to the number of employees; ii) SIZE2 related to the volume of sales; and iii) SIZE3 related to the total number of net assets.

- *Block 2:* comprises the variables of reputation of the enterprise. Two variables have been considered: i) AGE1 related to the age or length of enterprise service; and ii) AGE2 related to the number of years that the enterprise has belonged to its current owner.

- *Block 3:* Related to the ownership and control structure, we considered the variable DIR, a *dummy* variable that takes the value 1 if the enterprise is managed by a non-owner.

- *Block 4:* comprises the variables defining the lending relationship. Five variables were included in this group: i) NFC related to the number of financial companies with which the enterprise maintains a relationship; ii) AR which measures the age of the relationship with the main finance company, and iii) PERC, REALCUNR, and REALCR which measure, respectively, whether the enterprise provides covenants of a personal or real nature, related or unrelated to the activity of the enterprise.

Figure 1. Variables and proposed relationships



Additionally, the model includes the sector of the main activity of the SMEs as a control variable. The variables named after the abbreviations INDSEC, COMSEC, CONSEC and SERSEC, serve to identify whether the enterprise belongs to industry, commerce, construction or services, respectively.

4.2. Data and methodology

In order to compare the relationships outlined in the model, an empirical analysis has been made on a sample of 13,200 SMEs belonging to the *"Spanish Guide of Exporting Enterprises*". The fieldwork has been done by an e-mail questionnaire sent out between November 1999 and January 2000. The number of valid questionnaires obtained sum a total of 410 enterprises, which represents 3.1% of the enterprises surveyed.

In order to clarify the relationships which are established between the independent variables and the TBR, the survey has been divided into four groups in function of the values that the ratio may have. *Group I* comprises those enterprises with lower degree of borrowing, which present a TBR lower than or equal to 25%. *Group 2* includes enterprises with a TBR ranging between 25 and 50%. *Group 3* consists of enterprises with a TBR ranging between 50 and 75%. And, finally, *Group 4* represents those enterprises with a higher degree of borrowing, namely, with a TBR above 75%.

Next, the existence of significant differences between the groups is analyzed, considering each of the independent variables by means of an ANOVA analysis. The average values of the independent variables used in the analysis of the different groups are shown in table 1. Significant differences may be observed with respect to the following variables: i) number of employees; ii) volume of net total assets; iii) number of financial companies with which the enterprise maintains a relationship; iv) age of the relationship with the main financial company; and v) the existence of real covenants unrelated to the business.

Finally, in order to contrast the hypotheses established in the theoretical part, and to analyze the combined effect of the explanatory variables on the TBR, a model of hierarchical regression has been developed, consisting in the successive introduction of the groups of variables corresponding to the four blocks considered into the regression equation, namely, enterprise size, reputation, ownership and control structure, and characteristics of the lending relationship.

4.3. Results

Beginning with the "size" of the enterprise, it may be observed that the enterprises in the survey have an average staff of 35 employees; an average volume of sales of 710 millions pesetas (4,27 millions €); and average net assets of 347 millions pesetas (2,09 millions €). It may be noted that the enterprises with least borrowing —*group 1*, with borrowing lower than 25%—are generally smaller enterprises, in terms of number of employees and business turnover. In turn, the larger enterprises present a TBR ranging between 25 and 50%. Although the differences are statistically significant for the variable number of employees and volume of assets, the analysis of the data does not seem to confirm the relationships that might be expected in theory, that is, H.1. is not fulfilled: the larger the size, the higher the total borrowing ratio (TBR) ratio. In this sense, the results are not contradictory with the ones obtained in other empirical works (Peterson and Schulman, 1987; Holmes and Kent, 1991). It may be considered that larger enterprises present higher capitalization rates and, consequently, lower levels of borrowing.

With respect to the "main activity sector", it may be observed that 39% belong to the service sector, 29% belong to the industry sector, and 22% belong to the commerce sector. Although there are no significant differences between groups, except in the case of the construction sector, it may be noted that the enterprises with higher borrowing belong to industry, whereas those with lower borrowing belong to the services sector.

With respect to the "reputation of the enterprise", measured by means of the variable length of service—AGE1—, it may be observed that the enterprises in the survey have an average age of 20 years. It may be equally noted that the enterprises belonging to *Group 1*—with lower borrowing—, as well as the enterprises included in *Group 4*—with higher borrowing—, are the youngest ones, with an average age of 18 and 17 years, respectively. It must be underlined that it is the enterprises belonging to *Group 2*, with a TBR ranging between 25 and 50%, which are the most long-standing and experienced. In consequence, even though the differences are statistically significant between groups for variable AGE1, the analysis of the data does not seem to confirm the relationship established at a theoretical level in the model proposed, that is, there is no fulfillment of H.2., which states that the greater the reputation—measured in two ways by the age of the enterprise and the years it has belonged to the current owner—, the higher the total borrowing ratio. As far as variable AGE2 is concerned—years in possession of current owner—the results are similar.

With respect to the "ownership and control structure" in the survey, it may be observed that only 11.48% of the enterprises are managed by non-owners. As might be expected in an SME collective, there is generally no clear separation of functions, the ownership and control being in the owner's hands. However, there is no sign of significant differences between the groups considered. Data analysis does not seem to confirm the relationships established at a theoretical level by agency theory and the signals approach—H.3a is not fulfilled—, although there seems to be a confirmation of the sense of the relationship, according to the pecking order theory—H.3.b—.

Finally, we will focus on the main characteristics that define the lending relationship. Beginning with the "number of financial companies", it may be observed that the enterprises in the survey are associated, on average, to at least 4 financial companies. Moreover, some statistically significant differences between the groups under study may be noticed. Enterprises with lower degree of borrowing—*Group 1*—deal with 3 companies as an average, whereas those with higher degree of borrowing—*Group 4*—deal with 5. In consequence, it may be observed that the enterprises with higher borrowing are the ones dealing, on average, with a higher number of companies. This confirms the sense of H.4b in the relationship between this variable and the TBR.

Concerning the "age of the relationship with the main financial company", the age of the relationship for the group under survey is only 3.77 years. If we compare this data with the average age of the enterprises, 20.47 years, it could be noted that the relationships are usually rather recent. This may indicate great competitiveness in the current credit market, so that many entrepreneurs frequently change company. In a similar way, some statistically significant differences are noticed between groups, the age of the relationship is generally younger for those enterprises with lower degree of borrowing. This

confirms H4.a.—-.

Table 1: ANOVA

VARIABLES		Global	Group 1	Group 2	Group 3	Group 4	Signif.
LSIZE1	Measured	34.85	19.57	53.08	36.32	34.21	.025
(Ln Number of employees)	No. cases	392	74	58	114	146	
LSIZE2	Measured	709.73	592.44	1117.3	671.95	629.44	
(Ln Volume of sales)	No. cases	379	71	58	112	138	
LSIZE3	Measured	346.89	545.29	911.29	479.22	346.89	.035
(Ln Volume of net total assets)	No. cases	274	44	46	84	100	
INDSEC	Measured	.2916	.2267	.3621	.2857	.3014	
(Industry activity sector)	No. cases	391	75	58	112	146	
COMSEC	Measured	.2174	.1733	.2414	.2411	.2123	
(Commerce sector)	No. cases	391	75	58	112	146	
CONSEC	Measured	.00844	.00533	.0017	.1161	.1027	0.093
(Construction sector)	No. cases	391	75	58	112	146	
SERSEC	Measured	.3862	.5333	.3793	.3125	.3699	
(Services sector)	No. cases	391	75	58	112	146	
AGE1	Measured	20.47	18.50	27.28	21.86	17.69	.018
(Years since the commercial activity began)	No. cases	393	76	58	114	145	
AGE2	Measured	16.59	15.43	18.72	19.21	14.38	
(Years in possession of the current owner)	No. cases	388	77	57	110	144	
DIR	Measured	.1148	.1169	.1379	.1316	.0090	
(Managed by a non-owner)	No. cases	392	77	58	114	143	
NFC	Measured	4.18	3.32	3.93	4.50	4.47	.033
(Number of finance companies)	No. cases	395	75	58	115	147	
AR	Measured	3.77	3.20	4.20	4.04	3.59	.000
(Age of the relationship with the main finance Co.)	No. cases	347	49	51	113	134	
PERC	Measured	.20	.14	.19	.19	.23	
(PERSONAL covenants)	No. cases	273	44	32	85	112	
REALCUNR	Measured	.20	.12	.0093	.27	.21	0.083
(REAL covenants unrelated to the business activity)	No. cases	271	42	32	85	112	
REALCR	Measured	.18	.11	.0096	.19	.22	
(REAL covenants related to the business activity)	No. cases	271	44	31	84	112	

We could conclude the descriptive analysis by referring to the importance of covenants, as well as to their nature, though it must be remarked that the number of responses and the quantity of the cases surveyed in relation to these variables is considerably lower —273 cases. 20% of the cases have covenants of a personal or real type unrelated to the business, and 18% have real covenants related to the activity. Within groups, it is observed that the percentages are higher in those enterprises that present higher total borrowing ratios—which confirms H4c—, even though it is only for the case of the real covenants unrelated to the business that the differences between groups are statistically significant.

Finally, a model of hierarchical regression has been proposed for across-the-board comparison of the hypotheses. Before that, the array of the correlations between the variables has been calculated, and a

very high correlation observed among the variables SIZE1, SIZE2 and SIZE3. For this reason, the variable corresponding to the Napier's logarithm of the volume of net total assets has been introduced as an explanatory variable of the size in the regression model—table 2—.

In the first step, the variable LSIZE3 and those variables of control related to sectors of main activity were included; it could be observed that only the volume of assets is statistically significant. Thus, the relationship is confirmed: the greater the volume of assets, the higher the TBR.

In the second step, the variables related to reputation of the enterprise, namely, AGE1 and AGE2, were added to the previous variables. In this case, the variable size related to the volume of assets remains statistically significant, which does not confirm the hypothesis related to the variable reputation, nor even the sense of the relationship for the variable AGE1.

In the third step, the variable DIR, a variable related to the ownership and control structure was added to the previous variables. In this case, it may be observed that the volume of assets is the one statistically significant. With respect to the variable DIR, it may be remarked that the sense of the relationship is the one observed according to the pecking order theory, even though it is not statistically significant.

In the fourth step, two variables related to the characteristics of the lending relationship were added to the previous variables, namely, NFC—number of financial companies—and AR—age of the relationship—. In this case, it is observed how the variable related to the size becomes statistically insignificant, whereas the "number of financial companies" is indeed significant. In the array of correlations, it may be remarked that both variables are correlated in such a way that enterprises with larger size usually deal with greater number of financial companies, which favors their access to the credit market. In this sense, the hypothesis established in the theoretical model may be confirmed. Concerning variable AR, the sense of the relationship is the opposite. In consequence, the "age of the relationship with the main financial company" is not an explanatory factor of the CS. This circumstance is due to the features of the credit market, which is very competitive, and the change of company becomes, thus, a normal practice among the enterprises.

Table 2: Hierarchical regression model

VARIABLES	Step 1	Step 2	Step 3	Step 4	Step 5
(Constant)	41.441	46.788	44.432	27.692	35.662
LSIZE3	12.486**	13.495**	14.018**	-.576	-3.046
(Volume of net total assets)					
INDSEC	-39.441	-40.997	-38.782	-38.379	-45.166
(Industry activity sector)					
COMSEC	-30.644	-32.402	-31.198	-32.385	-32.527
(Commerce sector)					
CONSEC	-17.224	-20,597	-21.367	-12.070	-11.336
(Construction sector)					
SERSEC	4.456	.562	2.926	29.200	30.504
(Services sector)					
AGE1		-.664	-.573	-.128	-.412
(Years since the main activity began)					
AGE2		.371	.296	-.438	-.294
(Years in possession of the current owner)					
DIR			-31.106	-32.674	-21.925
(Managed by a non-owner)					
NFC				24.519***	24.119***
(Number of finance companies)					
AR				-7.130	-9.241
(Age of the relationship with the main finance Co.)					
PERC					69.242*
(PERSONAL covenants)					
REALCUNR					33.325
(REAL covenants unrelated to the business activity)					
REALCR					-24.400
(REAL covenants related to the business activity)					
Dependent variable: total debt (TBR) * Significant at 5% (the lowest) ** Significant at 2% (lower) *** Significant at 1%(higher)					

Finally, in the fifth step, the variables related to the covenants are added to the previous ones. In the model of total regression where all the factors are included, it may be observed that the statistically significant variables explanatory of the RET are the following ones: the number of finance companies—NFC—and the existence of personal covenants—PERC—. Both factors are positively related to the TBR, which confirms the hypotheses established in the theoretical model.

5. Summary and concluding remarks

The main objectives of this work are: give an exploratory analysis about the nature of the factors determining the CS of the SME. The distinctive features that this type of enterprises present are centered

on three major characteristics: i) the impossibility of using the issue markets, and, therefore, the absence of an objective mechanism of assessment, ii) the dependency of this type of enterprises on the bank credit market; and iii) the presence of a ownership and control structure that is characterized by the non-separation of both functions.

All these circumstances entail two important consequences. On the one hand, they increase the degree of information asymmetry that exists among the different agents involved in the market, the agency theory, the pecking order theory and the signals approach are the optimal conceptual referential framework to study the decisions related to the CS in the case of the SME. On the other hand, they require a reconsideration of the analysis, the relationship LR in the credit market is the ideal referential framework or unity of analysis.

In the specific case of the SME and besides the importance of quantitative variables related to the size, and other qualitative variables related to the reputation, the ownership and control structure, and the characteristics of the lending relationship, seem, *a priori*, relevant factors to be taken into account in the analysis of this type of decisions.

- Concerning the size, even though the differences are statistically significant for the number of employees and volume of assets, the analysis of the data does not seem to confirm the relationships that might be expected in theory, namely, the larger the size, the higher the total borrowing ratio.

- Related to the age of the enterprises AGE1, even though the differences are statistically significant between groups for this variable, the analysis of the data does not seem to confirm the relationship established at a theoretical level in the proposed model. With respect to the variable AGE2—years in possession of the current owner—the results are similar—that is, H.2. would not be fulfilled—.

- With respect to the variable ownership and control structure, it may be observed that those enterprises with higher specialization of the functions are the ones with lower degree of borrowing. Then, it may be confirmed that the sense of the relationship is negative, in the same way as the pecking order theory suggests, even though it is not statistically significant in the regression model.

- Finally, with respect to the characteristics of the "lending relationship", the number of financial companies and the existence of real covenants unrelated to the business are the relevant variables. It may be remarked that are the enterprises with higher degree of borrowing the ones usually dealing with higher number of companies, which confirms H.4.b. about the relationship between this

variable and the TBR. In a similar way, it may be observed that, in 20% of the cases, the enterprises have covenants of a personal or real type not related to the business, and 18% have real covenants related to the activity. Notice that between groups, the percentages are higher for those enterprises that present higher total borrowing ratios—which confirms H.4.c.—, even though it is only the differences between groups for the case of the real covenants not related to the business that are statistically significant.

All in all, the empirical analysis only confirms the hypotheses related to the total RET for the variables: "number of finance companies" —NFC— and "existence of real covenants not related to the business" —REALCUR. This confirms the hypotheses H.4.b. and H.4.c. In this sense, it may be stated that dealing with a greater number of companies, and establishing personal covenants, increase the possibilities of fund-raising on the credit market, avoiding situations of credit rationing. On the other hand, the empirical analysis does not permit such confirmation of the explanatory power of other variables related to size—H.1.—, reputation—H.2.—, or the ownership and control structure—H.3.—. This is due to the characteristics that currently define the credit market, which is very competitive and where all financial companies constantly strive to gain new clients.

The results of the study are in line with the latest research, which is still in its initial phases, due to the number of its research studies and to the rather inconclusive results generally obtained.

In spite of the difficulties in studying financial decisions within the specific field of SMEs, we believe that it would be useful in the future: i) to continue studying in more detail the demand factors, that is, the internal variables of the enterprise that determine this type of decisions; and ii) to incorporate into these studies the analysis of the supply factors, which are related to the characteristics of the financial markets.

Notes

1.- We can highlight, *inter alia*, the works of: Easterbrook (1984) related to the decision on borrowing as a mechanism to facilitate the supervision of the financial markets; and Jensen (1986) related to the decision on borrowing as a mechanism to reduce the funds of free availability.

2.- An extension of the financial agency theory is the so-called "theory of groups of interest". Following a similar reasoning to the one in the previous model, this new theoretical approach takes into account other groups of interest in the enterprise which may be affected by the enterprise financial decisions, namely: workers, clients, and providers (Titman, 1984; Cornell and Shapiro, 1987; Willianson, 1988; Fama, 1990).

3.- Scholtens (1999) studied the mechanisms of control that diminish the information asymmetry in order to confront efficient projects, distinguishes between: ownership, collateral and covenants, relationships and reputation (page 138).

4.- The SMEs enter the credit market with low-quality insufficient information, which increases the information asymmetries that already exist, although in Norton's opinion (1991), these information differences depend on the "stage or life cycle" that the enterprise is going through. During the *growing* stage of the SME, the financial markets have little or no information about it. It is for this reason that self-financing and very short-term borrowing prevail as a source of fund-raising. During its *development* stage, the SMEs steadily consolidate their position in both markets and the success or the failure of their projects, as well as the fulfillment of their financial compromises, permit the development of relationships with the financial companies that may facilitate their access to the credit market with more favorable conditions, establishing capital structures based on long-term borrowing. Once in their *maturity* stage, the SMEs have access to the capital market and is in that moment that the bond is issued, the development of projects by means of financial mediators (e.g. Loan Guarantee Association or Capital Venture Enterprises), and the increment in capital is more important as sources of finance.

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